Product sheet

Sp2/0-Ag14 Cells | 400481

General information

Description	The Sp2/0-Ag14 cell line, commonly referred to as Sp2/0, is a murine myeloma cell line used extensively for the production of monoclonal antibodies. Originating from the BALB/c mouse strain, this cell line was developed by fusing spleen cells from immunized mice with myeloma cells that lack the enzyme hypoxanthine-guanine phosphoribosyltransferase (HGPRT). This deficiency makes Sp2/0 cells unable to survive in HAT (hypoxanthine, aminopterin, thymidine) medium, a feature crucial for hybridoma selection when fused with spleen cells from immunized mice, as only the hybridoma cells can proliferate in this selective medium. The Sp2/0-Ag14 cell line is characterized by its stability and robustness in cell culture, making it a preferred host for hybridoma production. The absence of immunoglobulin production in these cells is a critical feature because it prevents the secretion of endogenous immunoglobulins that could interfere with the monoclonal antibody produced by the hybridomas. This cell line has been extensively used in scientific research and industrial applications for generating monoclonal antibodies against a wide array of antigens. The antibodies produced are used in research, diagnostics, and therapeutic applications, highlighting the significant utility of the Sp2/0 cell line in biotechnological and pharmaceutical industries.
Organism	Mouse
Tissue	Blood
Disease	B cell hybridoma
Synonyms	SP2/0-Ag14, SP2/0-AG14, SP2/0-ag14, Sp2/O-Ag14, SP2/O-Ag14, Sp2/0-Ag-14, SP2-0-Ag14, SP2/0 Ag-14, SP-2/0-AG14, Sp 2/0-Ag 14, Sp2/0, SP2/0, Sp2/O, SP2/O, SP-2, SP2, GM03569, GM3569, GM03569B, GM3569B, GM03569D

Characteristics

Breed/Subspecies	BALB/c
Morphology	Round cells
Growth properties	Adherent/Suspension

Regulatory Data

Citation	Sp2/0-Ag14 (Cytion catalog number 400481)
Biosafety level	1
NCBI_TaxID	10090

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CellosaurusAccession	CVCL_2199

Biomolecular Data

Antigen expression	H-2d
Viruses	Tested and found negative for ectromelia virus (mousepox).

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Supplements	Supplement the medium with 10% FBS
Subculturing	Collect medium with floating cells in a microcentrifuge tube. Rinse the adherent cells using PBS without calcium and magnesium (3-5 ml PBS for T25, 5-10ml for T75 cell culture flasks). Add Accutase (1-2ml per T25, 2.5ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at 37 degree Celsius for 10 minutes. Combine the floating cells and the detached cells in one tube, centrifuge at 300xg for 3min. Carefully resuspend the cells in fresh medium and dispense into new flasks which contain fresh medium.
Seeding density	Maintain cell density between 5 x 10^4 and 5 x 10^6 viable cells/ml.
Fluid renewal	2 to 3 times per week
Freeze medium	As a cryopreservation medium, use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

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Thawing and Culturing Cells	1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. 2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required. 3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains. 4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening. 5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently. 6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium. 7. Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth. 8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
Shipping Conditions	Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.
Storage Conditions	For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Quality control / Genetic profile / HLA

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Sterility	Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods. To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.